

LITTELFUSE SOLID-STATE RELAYS TAKE A LOOK INSIDE



**HIGH
ENDURANCE** 
SOLID STATE RELAYS

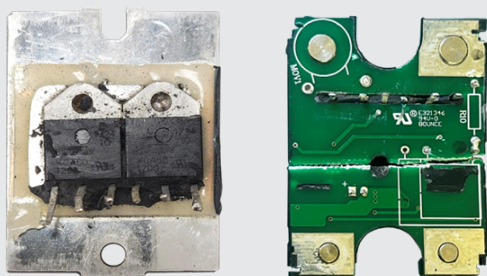
End Costly Downtime With Unmatched Reliability

According to the International Society of Automation, “**Downtime costs every factory at least 5% of its productive capacity, and many lose up to 20%.**”¹ It's a staggering metric, but the downtime can equate to the loss of thousands of dollars per minute.

Our **solid-state relays** are the solution with increased operational uptime, consistent performance, and high-quality components. These relays are the answer to costly production disruptions.

It's easy to see the difference in quality under stress testing – just compare our relays to our competitors*

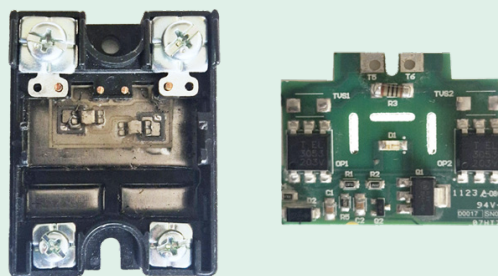
Competitor – General Purpose "Discrete Design" Solid-State Relay



- Provides less than 60K **stress cycles**
- Low-endurance: limited ability to withstand repeated use
- Early degradation of performance
- More downtime and increased operational risk

Discrete Design: Low-cost packaged semiconductors mounted with screws to a baseplate. Offers limited thermal performance and is typically suitable only for light-duty or non-industrial applications.

Littelfuse – High Performance "DCB Design" Solid-State Relay



- Provides more than 750K **stress cycles**
- High-endurance: ability to withstand repeated and prolonged use
- Long-term reliability and performance
- More uptime and safer operations

DCB Design (Direct Copper Bonding): A high-performance assembly method where semiconductor chips are soldered directly onto a ceramic-insulated copper layer. This allows superior heat dissipation and mechanical robustness, ideal for industrial and commercial applications requiring high reliability.

¹ISA Interchange, Authors Dave Crumrine and Doug Post.

*These results were obtained through stress test cycles conducted under controlled conditions within Littelfuse own testing environment.



Littelfuse®

Expertise Applied | Answers Delivered

Applications

Industrial Ovens

HVAC Equipment

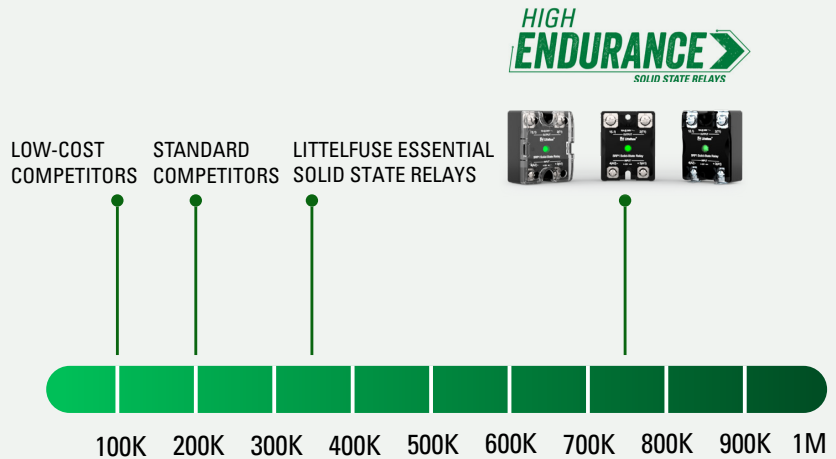
Plastic and Packaging Machinery

Commercial Cooking Equipment

Heating and Motion Control in Industrial Automation

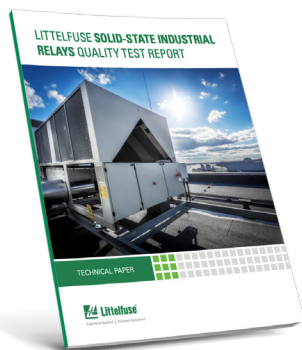
Theatrical, public & traffic lighting control

Lifetime stress cycles



Gain insight –

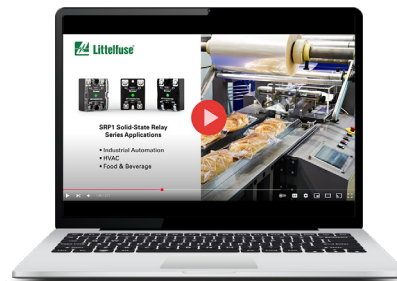
Our Quality Test Report compares products



Read the [test report](#).

Quality matters –

Learn about our solid-state relay offering



Watch the [Littelfuse Industrial Solid-State Relays](#) video.

For more information and detailed datasheets, visit [Littelfuse.com/IndustrialSolidStateRelays](https://www.littelfuse.com/IndustrialSolidStateRelays).

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